

CLAIMS

What is claimed is:

1. A thrust ball bearing, comprising first and second circular ring shaped bearing disks arranged in spaced-apart disposition and moving eccentrically to one another; and bearing balls arranged between the first and second bearing disks for rolling along circular tracks defined by the first and second bearing disks, said first and second bearing disks made from a through-hardenable ferrous material.
2. The thrust ball bearing of claim 1, wherein the bearing disks are made of an unalloyed, low-alloy or high-alloy ferrous material.
3. The thrust ball bearing of claim 1, wherein the bearing disks are made of a steel of the type selected from the group consisting of C 45, C 55, Ck 67, C75, 100 Cr 6 and 85 Mn 3.
4. The thrust ball bearing of claim 1, wherein the bearing disks are made by a non-cutting shaping process.
5. The thrust ball bearing of claim 4, wherein the shaping process is carried out at a shaping speed of ≤ 2 m/min.

6. The thrust ball bearing of claim 1 for use in a scroll compressor having a housing accommodating a revolving scroll member mounted on a crank pin of a shaft, a stationary scroll member secured in the housing, said first bearing disk connected with the revolving scroll member and said second bearing disk securely fixed to the housing, whereby a compressor space with variable volume for transport of a medium is formed during interaction of the revolving scroll member and the stationary second scroll member, and a generated thrust is absorbed by the revolving scroll member via the bearing balls.

7. A scroll compressor, comprising:

- a housing;
- a stationary scroll member secured in the housing;
- a revolving scroll member accommodated in the housing and so driven as to revolve at an eccentricity relative to the stationary scroll member, thereby compressing a medium in a compression space defined between the scroll members; and
- a thrust ball bearing having a first bearing disk connected with the revolving scroll member, a second bearing disk securely fixed to the housing, and bearing balls arranged between the first and second bearing disks for rolling along circular tracks defined by the first and second bearing disks, said first and second bearing disks made from a through-hardenable ferrous material.

8. The scroll compressor of claim 7, wherein the bearing disks are made of an unalloyed, low-alloy or high-alloy ferrous material.
9. The scroll compressor of claim 7, wherein the bearing disks are made of a steel of the type selected from the group consisting of C 45, C 55, Ck 67, C75, 100 Cr 6 and 85 Mn 3.
10. The scroll compressor of claim 7, wherein the bearing disks are made by a non-cutting shaping process.
11. The scroll compressor of claim 10, wherein the shaping process is carried out at a shaping speed of ≤ 2 m/min.